

What is claimed is:

1. A thermoplastic polyurethane, obtainable by reacting
  - a) isocyanates with
  - b) chain extenders and
  - c) polymer polyols, said polymer polyol being prepared using a difunctional polyether polyol having exclusively primary OH groups and a molecular weight of from 500 to 2000 as a carrier polyol, and
  - d) if appropriate, polyols having a molecular weight of from 400 to 3000 g/mol and an average functionality of from 1.8 to 2.3.
2. The polyurethane according to claim 1, wherein the polymer polyol (c) is prepared using polytetrahydrofuran as the carrier polyol.
3. The polyurethane according to claim 1 or 2, wherein the polymer polyol (c), in addition to the carrier polyol, comprises a solids content, said solids content comprising acrylonitrile, styrene and macromer, and the proportion of acrylonitrile being from 10 to 50% by weight, the proportion of styrene from 30 to 90% by weight and the proportion of macromer from 1 to 10% by weight, based on the total weight of the solids content of the polymer polyol (c).
4. The polyurethane according to any of claims 1 to 3, wherein the polymer polyol (c) has a solids content of from 20 to 50% by weight, based on the total weight of the polymer polyol.
5. The polyurethane according to any of claims 1 to 4, wherein the polymer polyol (c) is used in an amount of from 30 to 75% by weight, based on the total weight of the thermoplastic polyurethane.
6. The polyurethane according to any of claims 1 to 5, wherein the reaction is carried out at an isocyanate index of from 1005 to 1025.
7. The polyurethane according to any of claims 1 to 6, which is contact-transparent.
8. A process for producing thermoplastic polyurethane by reacting
  - a) isocyanates with
  - b) chain extenders and
  - c) polymer polyols, said polymer polyol being prepared using a difunctional polyether polyol having exclusively primary OH groups and a molecular weight of from 500 to 2000 as a carrier polyol, and
  - d) if appropriate, a polyol having a molecular weight of from 400 to 3000 g/mol and an average functionality of from 1.8 to 2.3.

9. The use of the thermoplastic polyurethane according to any of claims 1 to 7 for producing films, cable sheaths or injection moldings.
- 5 10. A ski comprising thermoplastic polyurethanes according to any of claims 1 to 7.